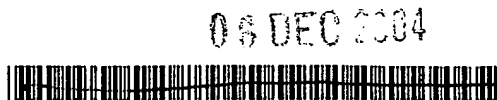


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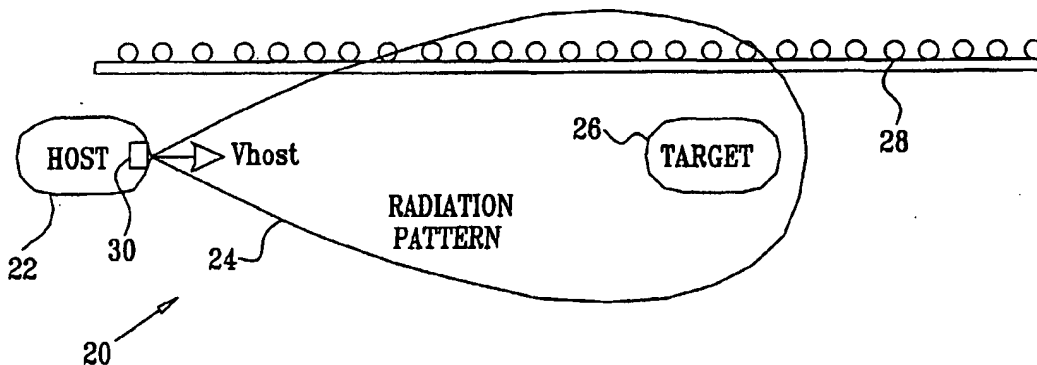
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(54) Title: FORWARD-LOOKING RADAR SYSTEM



(57) Abstract: An assembly for receiving and transmitting millimeter (mm) waves, including at least one mm wave reflector (84, 86, 88) and at least one mm transmission wave feed (72) configured in a transmission feed location (34) within the at least one mm wave reflector. The assembly also includes a plurality of receiving mm wave feeds (72) configured in respective receiving feed locations (36) within the at least one mm wave reflector; and a radio frequency (RF) module (38). The RF module is coupled to the at least one mm transmission wave feed and to the plurality of the receiving mm wave feeds, so as to drive the at least one mm transmission wave feed to transmit outgoing mm waves and to simultaneously receive incoming mm waves from all of the plurality of the receiving mm wave feeds.